

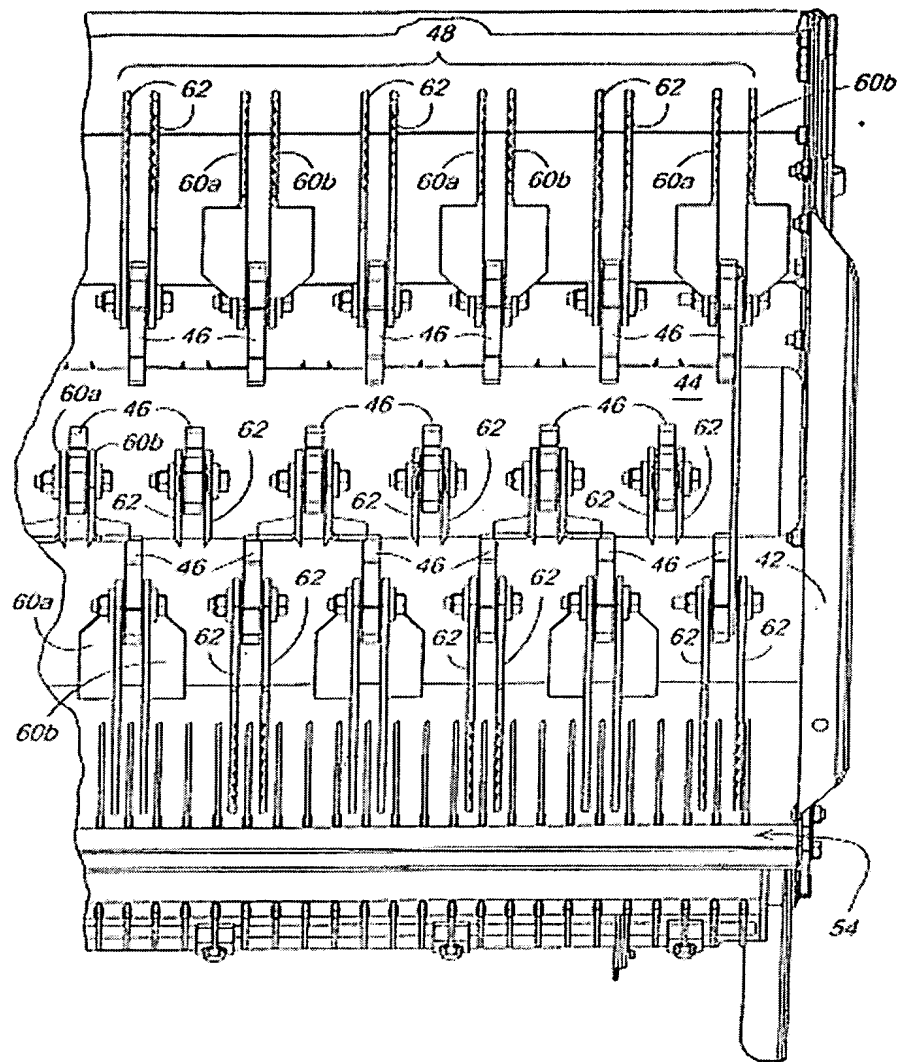
REMARKS

Claims 1 and 3-14 are pending in the present application. Claims 1-3-14 were rejected in the Office Action dated December 9, 2005.

Claims 5-7 were objected to. Appropriate amendments have been made herein.

Summary of Claimed Subject Matter

A straw chopper 40 has a rotor 44 in a housing 42. The rotor 44 has several mounting locations 46 for receiving chopper blades 48. The housing has an inlet 50 for receiving crop material and an outlet 52 for discharging chopped crop material back to the field. The rotor includes paddle blades 60 which comprise a blade 70 with a leading edge 72, a trailing edge 74, a first end 76 and a second end 78. The first end has a mounting assembly 80 that comprises a mounting hole. This mounting assembly 80 allows the blade to be pendulously mounted to mounting location 46 on rotor 44. Second end 78 of the blade has a tip 82. The leading edge 72 has a sharpened cutting edge 84 that extends from tip 82 toward first end 76. Adjacent to the first end 76 is a paddle 86 extending at an angle from the plane of blade 70. Paddle 86 extends in a perpendicular direction from blade 70 and is integral with blade 70.

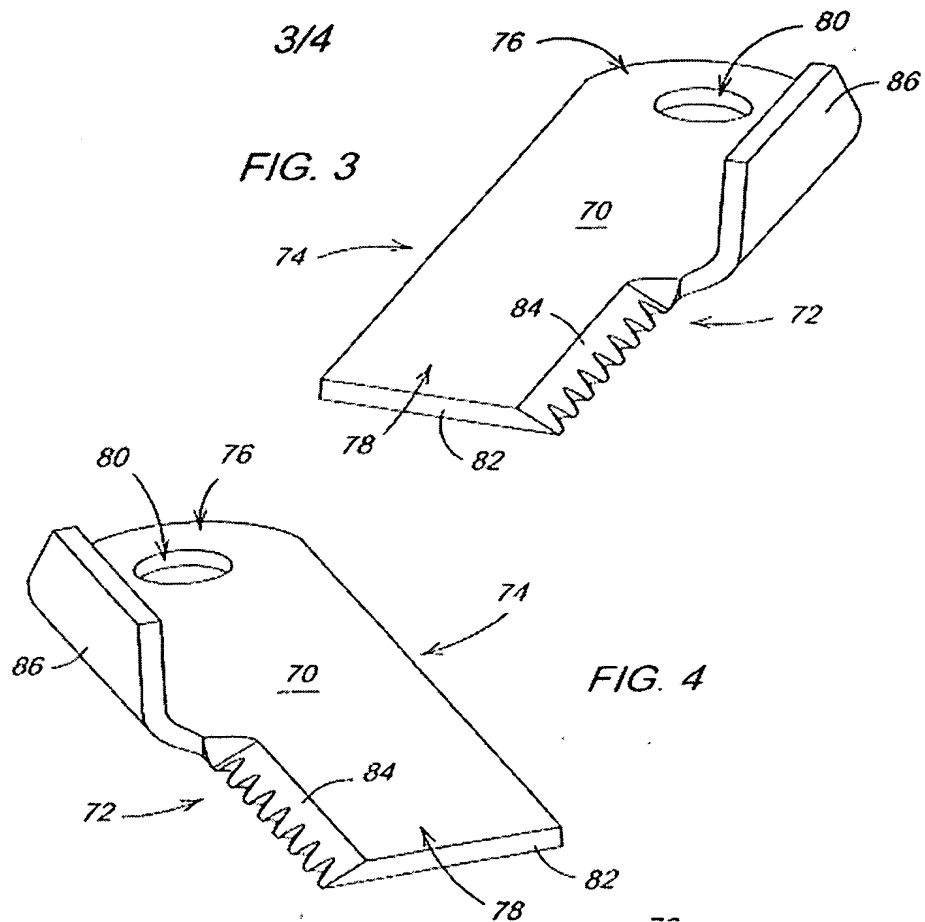


Issues

The issues are:

1. Do legs 56 constitute a "paddle" extending from a "leading edge" of a "blade" that is "pendulously mounted" to a "rotor" or "straw chopper", as generally recited in claims 1, 5 and 9?
2. Is the paddle "positioned between the mounting assembly and the cutting edge as recited in claim 5?"
3. Is the paddle an "integral paddle bent from a flat blade ... between the

FIGURES FROM THE PRESENT INVENTION:



mounting hole and the cutting edge” as recited in claim 9?

4. Is there any suggestion or motivation in the art to form the blade and the paddle integral with one another (see e.g. claims 9-14)?

Argument

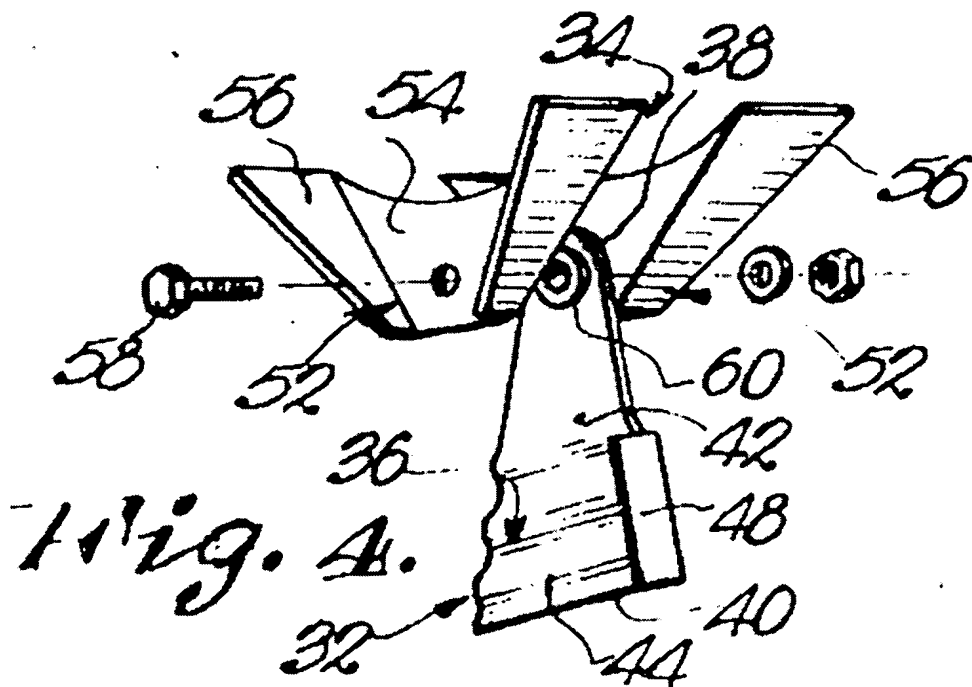
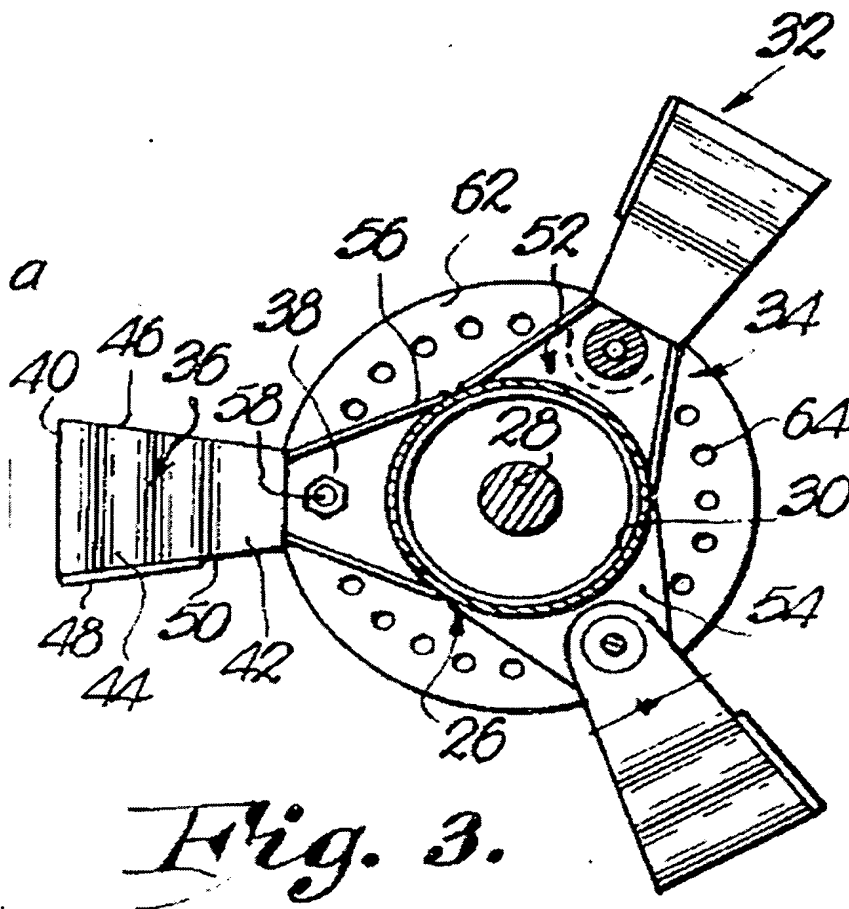
Rejection

The examiner rejected claims 1, and 3-11 under 35 USC 102(b) as being anticipated by Gaeddert (US patent number 3,717,062). He also rejected claims 9-14 under 35 USC 103(a) as being unpatentable over Gaeddert

Gaeddert discloses a “blade” 32 (col. 4, ln 28) that is pivotally coupled at its inner end 38 to a “sturdy base” (col. 3, ln 7) made of a pair of opposed saddles 52. These saddles include a panel 54 and supporting legs 56 that are welded to hub 30 of rotor 10. See, generally, col. 2, ln 55 to col. 3 ln 19.

Gaeddert discloses a pivot bolt 58 that extends through holes in blade 32 and saddles 52 so blade 32 can “swing about an axis” (col. 2, ln. 57-58) and “free swing[] ... during rotation of the rotor 10” (col. 3, ln 15-18). See also Figures 3 and 4 from Gaeddert, below:

FIGURES FROM THE GAEDDERT REFERENCE:



First Issue

The Examiner interprets both the Gaeddert blade 32 and the sturdy base on which it is pivotally mounted, to be the “blade” of claims 1, 5 and 9. This is incorrect.

Claim 1 recites that the blade includes a “blade mounting assembly” at a first end “for pendulously mounting the blade to a straw chopper” and a “paddle” that “extends ... from the leading edge” of the blade.

Claim 5 similarly recites that the blade has a blade “mounting assembly” for “pendulously mounting the straw chopper blade to a rotor” and a “paddle” that “extends ... from the leading edge” of the blade.

Claim 9 similarly recites a “mounting hole” on a blade’s first end “for pendulously mounting the blade to a rotor” and a “paddle” that “extends ... from the leading edge” of the blade.”

Legs 56, which the Examiner identified as the claimed “paddles”, are not pendulously mounted to anything, but are welded to the hub of Gaeddert’s rotor 30, and provide the solid support for Gaeddert’s swinging blade.

Gaeddert’s blade 32 does have a “flat sheet metal vane 48” which would appear to be a better fit for the “paddle” of the claims since vane 48 is actually a part of blade 32. Gaeddert vane 48, however, extends from the **trailing** edge of blade 32 and claims 1, 5, and 9 require that the paddle extends from a **leading** edge of the blade.

Second Issue:

Claim 5 recites that the paddle is “positioned between the mounting assembly and the cutting edge” where the “mounting assembly” “pendulously mounts” the “blade” to the “rotor”.

The Examiner identified bolt 58 as the mounting assembly, and edge 46 as a sharpened cutting edge.

Unfortunately, leg 56, which the Examiner identifies as the claimed “paddle” is not “positioned between” bolt 58 and edge 46.

Third issue:

Claim 9 recites that the paddle is an “integral paddle bent from the flat blade ... between the mounting hole and the cutting edge”.

Legs 56, which the Examiner calls the claimed paddles, are not integral with, nor bent from the Gaeddert blade between the blade cutting edge (which the Examiner identifies as item 46 on blade 32) and the blade mounting hole (the hole in the blade that receives bolt 58). The Gaeddert legs 56 extend instead from Gaeddert panel 54 which is welded to the Gaeddert rotor and which is pivotally coupled to Gaeddert blade 32.

Fourth issue:

In his rejection under 35 USC 103, the Examiner recognises that Gaeddert’s blade and paddle are separate components,. However, the Examiner believes they could be made integral (i.e. one piece) to “better reinforce the shank [42]” of Gaeddert blade 32, and because making two things into one involves only routine skill in the art.

First, in order to make Gaeddert legs 56 (the Examiner’s paddle) integral with Gaeddert blade 32 (the Examiner’s blade), one would eliminate the pivot joint formed of bolt 58 and bushing 60 that let the Gaeddert blade 32 pivot with respect to saddles 52, legs 56, and rotor 10.. If one eliminates these pivoting structures, *the resulting device would no longer read on the claims of the present invention* even if we assume, for the sake of argument that the Examiner’s rejection under Section 102 is valid (which we do not). The claimed “blade mounting assembly” for “pendulously mounting the blade to a rotor” (claims 1, 5 and 9) would no longer exist.

Second, there is a reason that straw choppers, both Gaeddert’s and those of the claimed invention, have pivoting blades: to prevent damage to the machine. Plant and other material thrown into a straw chopper often includes rocks, branches and other large, unchoppable objects. These indigestible chunks will damage the straw chopper if they impact straw chopper blades extending from the rotor that are rigid and fixed.

For that reason, straw choppers use pendulous or swinging blades that pivot outward under centrifugal force to chop the lightweight straw and plant matter. Larger chunks that impact the blades will deflect the blades, not break them off.

Gaeddert points to exactly this problem, noting that "Centrifugal forces acting on the blades 32 will not pull the structures off the hub 30 ***nor will they be torn loose from the hub 30 by the impact on the material being chopped.***" (emphasis added). See, Gaedert, col. 4, lines 28-31. The pivotal couplings between Gaeddert blade 32 and legs 56 that mount blade 32 to the rotor 10 are the structures that provide this ability not to be torn off.

In short, there is no teaching in Gaeddert or elsewhere to "reinforce" the shank of the straw chopper blades by fixing them rigidly (or forming them integral with) Gaeddert's welded-on-the-rotor mounting legs 56.

Any fees or charges due under 37 CFR 1.17(f) or otherwise due as a result of filing of the present paper may be charged against Deposit Account 04-0525. Two duplicates of this page are enclosed.

Respectfully,


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